

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Piedmont Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Georgia-Pacific Corporation
Emporia Plywood Facility
Emporia, Virginia
Permit No. PRO50283

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Georgia-Pacific Corporation has applied for a Title V Operating Permit for its Emporia, VA facility. The Department has reviewed the application and has prepared a Title V Operating Permit.

Engineer/Permit Contact: _____ Date: July 6, 2005

Air Permit Manager: _____ Date: July 6, 2005

Regional Deputy Director: _____ Date: July 6, 2005

FACILITY INFORMATION

Permittee/Facility

Georgia-Pacific Corporation – Emporia Plywood Facility
P.O. BOX Drawer D
Emporia, VA 23847

County-Plant Identification Number: 51-081-0020

SOURCE DESCRIPTION

NAICS Code: 321212

The facility is operated by Georgia-Pacific Corporation, and manufactures 3/8" softwood plywood. Logs are received in the Log Yard and taken to the Cut-Up where they go through debarking and are cut to usable lengths before being soaked in vats of hot water to loosen the fibers for peeling. Veneer is cut from the logs in the "Green End", and any residuals are chipped for use in the steam boiler or for shipment off-site.

After the veneer is sorted and clipped, it is dried in one of three veneer dryers, glued, and pressed. The plywood boards are then cooled and transported to the Plywood Trim Panel Saw to trim the edges. Sawdust generated from this process is collected in a vacuum system located above each saw, and transported to the Central Dry Waste System.

The facility is a Title V major source. This source is located in an attainment area for all pollutants, and is also a PSD major source, due to permitted emissions from its wood-fired boiler and dryers.

COMPLIANCE STATUS

The 179.4 MMBtu/hr wood-fired boiler was originally permitted on 11/17/77, and the permit was amended to allow burning of waste oil and other materials from Georgia-Pacific's Jarratt, VA facility on 08/21/96. Since the company never followed through on the proposed transfer of wood waste from the Jarratt facility for use in the Emporia wood-fired boiler, the 8/21/96 permit was rescinded. The Veneer Dryer No. 1 was originally permitted on 11/9/78 with an amendment issued 08/25/97. A veneer conditioning chamber (VCC) was permitted for construction 05/03/03 and the 8/25/97 permit was superseded. The 5/03/03 permit also permitted two existing dryers No. 2 and 3 and three existing presses (No. 1, 2 and 3) to avoid PSD. By imposing enforceable limits on the facility, the net emissions increase stayed below PSD significance levels. An administrative amendment was issued on 06/03/03 that supersedes the 05/03/03 permit. All other equipment at the source is existing (constructed prior to 1972). The last inspection was performed on 09/13/04 and the facility was deemed to be in compliance.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID (EU ID)	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Stack ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
WWB	Erie City Boiler Type VC 1978	179.4 MMBtu/hr heat input	Western Precipitation (Model 12VM, Size 50-5), multicyclone	B1	BS	PM/PM-10	November 28, 1977
			Bumstead-Woolford (12-foot diameter) scrubber	B2	BS	PM/PM-10	
Process Equipment							
VD1	Steam Heated Veneer Dryer No. 1 1978	11, 574 ft ² /hr 3/8" basis		VD1 A-F			June 3, 2003
VD2	Steam Heated Veneer Dryer No. 2 1971	20,400 ft ² /hr 3/8" basis					June 3, 2003
VD3	Steam Heated Veneer Dryer No. 3 1971	20,400 ft ² /hr 3/8" basis					June 3, 2003
VCC	Veneer Conditioning Chamber 2003	2,652 ft ² /hr 3/8" basis			EP 16		June 3, 2003
CS	Chip Screen 1996	14.1 tons/hr	Burning & Federal cyclone	C2	EP2	PM/PM-10	

Emission Unit ID (EU ID)	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Stack ID	Pollutant Controlled	Applicable Permit Date
CTL	Dry Waste Transfer System 1971	62,026 ft ² /hr	Carter-Day, baghouse	BH2	EP6	PM/PM-10	
CTLB	Central Truck Loading 1971	1.5 tons/hr					
P1, P2, P3	Plywood Press Units 1, 2, and 3 1971	62,026 ft ² /hr 3/8" basis			EP9		June 3, 2003
DB1, DB2	Log Debarkers 1 and 2 1987 (#1) 1979 (#2)	2,877 tons/hr			EP13a EP13b		
SDR	Specialty Lines Sander 1971	58,237 ft ² /hr	Carter-Day baghouse	BH1	EP7	PM/PM-10	None

EMISSIONS INVENTORY-Emissions for year 2004 are summarized in the following tables.

Emission Unit	2004 Actual Criteria Pollutant Emission in Tons/Year				
	VOC	CO	SO ₂	PM ₁₀	NO _x
WWB (Wood-Fired Boiler)	23.4	360.4	15.0	62.7	132.2
DB1, DB2 (Log Debarkers 1 and 2)	--	--	--	3.4	--
CS (Chip Screen)	--	--	--	1.1	--
Veneer Dryers (VD1, VD2, VD3)	135.7	10.5	--	60.6	--
CTB (Dry Waste Transfer System)	--	--	--	14.1	--
CTLB (Central Truck Loading Bin)	--	--	--	0.17	--
P1, P2, P3 (Plywood Press Units 1, 2, and 3)	22.1	--	--	3.7	--
SDR (Sander)	--	--	--	7.0	--
Total	181.2	370.9	15.0	152.8	132.2

Pollutant	Actual Hazardous Air Pollutant Emissions in 2004 in Tons/Year
Acetaldehyde	5.76
Acrolein	3.19
Benzene	2.48
Chlorine	0.46
Formaldehyde	8.21
Manganese & Compounds	0.94
Toluene	11.73

EMISSION UNIT APPLICABLE REQUIREMENTS – Fuel Burning Equipment

Limitations

The boiler was installed prior to the affected facility date of NSPS Subpart Db, and therefore does not have Db as an applicable requirement. The boiler is subject to the opacity standard of 20% for new sources. The boiler is subject to 40 CFR 63 Subpart DDDDD (63.7480 – 63.7575), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. However, the boiler is considered an existing affected source under this standard and compliance with the requirements in the standard must be achieved by September 13, 2007. The NESHAP should be addressed at TV renewal time.

The following limitations for the wood-fired boiler were taken from the November 28, 1977 permit:

1. Particulate emissions from the wood-fired boiler shall be controlled by the use of a multicyclone collector followed by a scrubber. The multicyclone collector and scrubber shall be provided with adequate access for inspection.
(9 VAC 5-80-10 H and 9 VAC 5-50-260)
2. Emissions from the operation of the wood-fired boiler shall not exceed the limits specified below:

Particulate Matter	27.0 lbs/hr	117.3 tons/yr	(9 VAC 5-50-260)
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(9 VAC 5-80-110)
3. The approved fuel for the wood-fired boiler is wood waste. "Wood waste" is defined as wood feed stock, bark, sawdust, sanderdust, dry waste, board trimmings, and other wood wastes capable of being hogged. This definition does not include wood contaminated with paints, plastics, finishing material, other foreign materials which might emit toxic air pollutants when burned, or other chemical treatments, except the wood waste may contain small quantities of equipment washdown oil, oil-contaminated spill cleanup material, process resins, glue solids, waxes, and edge sealers generated at the facility. The woodwaste may also contain small quantities of fuel oil for use during boiler startup. A change in fuel may require a permit to modify and operate.
(9 VAC 5-80-110)

The following permit condition was added to the Title V permit for enforceability:

4. The wood-fired boiler shall consume no more than 173,800 tons of wood waste per year, calculated as the sum of each consecutive twelve (12) month period.
(VAC 5-80-110)

The following permit conditions were added to the Title V permit. At the time the original permit was issued in 1977, it was not standard practice to include these requirements in the permit itself.

5. Visible emissions (excluding condensed water vapor/steam) from the wood-fired boiler stack shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity, as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.
(9 VAC 5-50-80 and 9 VAC 5-80-110)

Note: The permittee requested that soot blowing and grate cleaning be exempted from the opacity standard. However, a visible emissions evaluation conducted by DEQ staff on 8/22/02 showed no excess

visible emissions during the soot blowing and grate cleaning procedure, and relief from the standard does not appear to be available under current regulations.

6. Boiler emissions shall be controlled by proper operation and maintenance. Boiler operators shall be trained in the proper operation of all such equipment. Training shall consist of a review and familiarization of the manufacturer's operating instructions, at minimum.

(9 VAC 5-80-110)

Periodic Monitoring

The following chart delineates the periodic monitoring requirements for the wood-fired boiler:

Periodic Monitoring Requirements for EU ID WWB				
Limitations	Parameter	Monitoring	Record Keeping	Reporting
Particulate emissions controlled by a multicyclone followed by a scrubber	Control equipment operation, differential pressure across the multicyclone	Annual inspection of multicyclone to ensure structural integrity; Establishment of baseline differential pressure across multicyclone during performance test, inspection if actual differential pressure deviates more than 20% from baseline	Differential pressure readings across multicyclone, results of multicyclone inspections	
	Flow reading across the scrubber	Establishment of baseline flow of scrubber liquid during performance test, check liquid flow once per shift, inspection if flow/differential pressure deviates more than 20% below baseline	Flow of scrubber liquid checked once per shift, scrubber maintenance records	
Fuel allowed is woodwaste.	Boiler construction and design.	none needed	Fuel Throughput Records	none needed
Hourly and annual emissions limitations for the boilers.	Boiler rating; Fuel characteristics; Emission factors from AP-42; Formulas	Facility must keep on hand formulas, boiler ratings, fuel characteristics, emission factors from AP-42, and formulas to show that the boiler is unable to exceed these limits. SEE LIMITATIONS DEMONSTRATION BELOW.		
Control of boiler emissions through proper operation and maintenance.	Good written operating procedures; Maintenance schedule;	n/a	Maintain schedule on site. Records of maintenance and repair; Copy of operating procedures on site.	N/a
9 VAC 5-50-80 opacity standards	Visible emissions and opacity	Weekly visual inspection with Method 9 follow-up observation of apparent abnormal opacity condition.	Results of visual observations, cause of any abnormal and excess visible emissions, corrective action	Report results of any Method 9 observation, and cause and duration of excess emissions, as well as corrective action taken.

Conditions will be added to the TV permit to reflect the above chart. Monitoring conditions to be added for TV periodic monitoring demonstrations (9 VAC 5-80-110 B) are as follows:

- Weekly visual observation of the boiler stack, with Method 9 follow-up when apparent abnormal condition is noted.

LIMITATION DEMONSTRATION

This demonstration will show that maintaining records of boiler heat input capacity, fuel characteristics, emission factors, and formulas is sufficient for periodic monitoring for these conditions.

Hourly and annual emission limitations:

Given: Maximum rated heat input of 179.4 million Btu/hr
Annual fuel throughput limit (wood waste) is 173,800 tons/year

The following emission factors for wood-fired stoker boilers are from AP-42, Table 1.6-1 (updated 3/02):

PM (wet scrubber) = .066 lb/MMBtu
PM-10 (wet scrubber) = .065 lb/MMBtu

From Table 1.6-2, Bark/Bark and Wet Wood/Wet-Wood Fired boilers:

SO₂ = .025 lb/ton
CO = 0.60 lb/ton
NO₂ = 0.22 lb/ton

Dry wood-fired boilers:

NO₂ = 0.49 lb/ton

Formula for hourly emissions: rating (MMBtu/hr)*factor
Annual emissions: factor (lb/ton fuel)* tons fuel throughput*1 ton/2000 lbs
Heat capacity of wood waste is assumed to be 4500 Btu/lb

Calculations for Wood-fired boiler WWB (179.4 MMBtu/hr)					
	Permit Limits		Emission Factors	Hourly emissions	Annual emissions
	Lbs/hr	Tpy	Lbs/MMBtu	Lbs/hr	Tpy
PM	27.0	117.3	.066	11.8	51.9
PM ₁₀			.065	11.7	51.0
SO ₂			.025	4.5	19.1
NO _x			.355 (50/50 wet/dry)	63.7	278.9
CO			0.6	107.6	421.4
VOC			.013	2.3	10.1

Therefore, as long as the permittee does not exceed the throughput limit, the emission limits listed in Condition III.A.4 of the Title V permit will not be exceeded. As stated in the periodic monitoring chart, the facility will be required to keep the above listed emission factors, fuel characteristics, boiler ratings, and formulas on site.

Recordkeeping

The following record keeping requirements are for the purposes of periodic monitoring (9 VAC 5-80-110):

- Required to keep fuel throughput records
- Records of boiler ratings, fuel characteristics and formulas to provide compliance with emission limits.
- Maintain a copy of the operating procedures on site.
- Record scrubber liquid flow rate once per shift.

Testing

The following condition is from the Commonwealth of Virginia's *Regulations for the Control and Abatement of Air Pollution*:

- The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
(9 VAC 5-50-30, 9 VAC 5-80-110)
- The permittee shall perform a Method 5 stack test on the Erie City boiler (WWB) stack within 180 days of the issuance of the permit.
- If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM10	EPA Methods 5, 17 or as required by DEQ
Visible Emission	EPA Method 9 or as required by DEQ

(9 VAC 5-80-110)

Reporting

To support the periodic monitoring requirements (9 VAC 5-80-110 B) of the TV permit, the following conditions regarding reporting will be placed in the TV permit.

- Report annual fuel throughput (wood) and emissions (calendar year)
- Report the results of any Method 9 visible emissions evaluations

In addition, the permittee will:

- Report the results of the Method 5 stack test within 45 days of the test.

Streamlined Requirements

Boiler permit is current and requirements have been updated.

Inapplicable Requirements

Construction of this boiler commenced prior to the NSPS Subpart Db (100-250 MMBtu/hr) effective date of September 18, 1978.

EMISSION UNIT APPLICABLE REQUIREMENTS – Cut-Up and Green End (EU ID #DB1, DB2, and CS)**Limitations**

The equipment located in the Cut-Up and Green End (EU ID #DB1, DB2, and CS) consists of existing equipment that does not have any permit-related applicable requirements. Although DB2 was installed as a replacement in 1979, and DB1 was installed, also as a replacement, in 1987, there was no debottlenecking or net increase in emissions above PSD significance levels as a result of either installation, and the equipment installations were not subject to permitting. The only requirements placed upon the process by the Title V permit are the existing source visible emissions limits, and the emission limits from Rule 4-4. The grain loading requirements of Rule 4-17: Emission Standards for Woodworking Operations have been incorporated for the chip screen.

1. Visible emissions (excluding condensed water vapor/steam) from the Cut-Up and Green End (EU ID# DB1, DB2, and CS) shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 60 percent opacity.
(9 VAC 5-40-80 and 9 VAC 5-80-110)

2. Emissions from the operation of the debarkers (EU ID #DB1 and DB2) shall not exceed the limits specified below:

Particulate Matter	66.9 lbs/hr	(9 VAC 5-40-260)
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PM-10	66.9 lbs/hr	(9 VAC 5-40-260)
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(9 VAC 5-40-260 and 9 VAC 5-80-110)

3. Emissions from the operation of the Chip Screen (EU ID #CS) shall not exceed the limits specified below:

Particulate Matter	.05 gr/dscf	(9 VAC 5-40-2270)
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PM-10	.05 gr/dscf	(9 VAC 5-40-2270)
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(9 VAC 5-40-2270 and 5-80-110)

Periodic Monitoring

Monitoring to be added for TV periodic monitoring demonstration (9 VAC 5-80-110 B) as follows:

- Weekly visual observation of the debarkers and chip screen (EU ID #DB1, DB2, and CS), with Method 9 follow-up when apparent abnormal condition is noted.

LIMITATION DEMONSTRATION

This demonstration will show that maintaining records of the debarker particulate emission factor is sufficient for periodic monitoring for these conditions.

Hourly limitations:

Given: Log throughput capacity of 14 logs/min, or 110,823,000 feet/yr at maximum capacity
 Maximum capacity=24 hrs/day, 7 days/wk, 52 weeks/yr (8760 hr/yr)
 Hourly throughput = 110,823,000/8760 = 12,651 ft/hr

Log Density = 58 lb/ft²

Log Radius = 0.5 feet

Throughput capacity in tons/hr

$$12,651 \text{ ft/hr} \times 58 \text{ lb/ft}^2 \times \pi (0.5 \text{ ft})^2 \times 1 \text{ ton}/2000 \text{ lb} = 288.1 \text{ tons/hr}$$

The following emission factors for log debarkers are from AP-42, Section 10.1 (NOTE: WHILE THESE EMISSION FACTORS WERE SUBMITTED WITH THE APPLICATION IN 1998, THE CURRENT "PLYWOOD MANUFACTURING" SECTION 10.5, DATED JANUARY, 2002 LISTS EMISSIONS FROM DEBARKING AS "NON-DETECT", SO THESE NUMBERS ARE VERY CONSERVATIVE):

PM = .024 lb/ton

PM-10 = .011 lb/ton

Calculations for debarkers (DB1 & DB2)					
	Permit Limits		Emission Factors	Hourly emissions	Annual emissions
	Lbs/hr	Tpy	Lbs/ton	Lbs/hr	Tpy
PM	66.9		.024	6.9	
PM ₁₀	66.9		.011	3.2	

Therefore, as long as the permittee does not exceed the maximum throughput capacity, the emission limits listed in Condition IV.A.2 of the Title V permit will not be exceeded. As stated in the periodic monitoring chart, the facility will be required to keep the above listed emission factors, formulas and throughput capacity on site.

Recordkeeping

The following record keeping requirements are for the purposes of periodic monitoring (9 VAC 5-80-110):

- Required to keep records of throughput
- Required to keep records of monthly and annual emissions
- Required to keep records of any visible emissions evaluations

Testing

The permit does not require source tests for the chip screen. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

The following condition is from the Commonwealth of Virginia's *Regulations for the Control and Abatement of Air Pollution*:

- The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
 (9 VAC 5-50-30, 9 VAC 5-80-110)

- If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM10	EPA Method 5 or as required by DEQ
Visible Emission	EPA Method 9 or as required by DEQ

(9 VAC 5-80-110)

Reporting

To support the periodic monitoring requirements (9 VAC 5-80-110 B) of the TV permit, the following conditions regarding reporting will be placed in the TV permit.

- Report throughput and emissions (calendar year)
- Report the results of any Method 9 visible emissions evaluations

STREAMLINED REQUIREMENTS

The process weight rule (Rule 4-4: Emission Standards for General Process Operations) could be applicable to the chip screen, but would allow excessive emissions. The .05 gr/scf standard contained in the woodworking rule (Rule 4-17) is more stringent.

EMISSION UNIT APPLICABLE REQUIREMENTS – (Veneer Dryers EU ID#VD1, VD2, and VD3)

Limitations

Veneer Dryers No. 1, 2 and 3 are subject to the conditions of a permit dated 06/03/03.

1. The veneer dryers (EU ID #VD1, VD2, VD3) shall process no more than 375×10^3 square feet per year (3/8" basis), calculated as the sum of each consecutive 12 month period.
(9 VAC 5-80-110, and Condition 4 of 06/03/03 Permit)
2. Visible emissions (excluding condensed water vapor/steam) from the operation of the Veneer Dryers (EU ID# VD1, VD2, VD3) shall not exceed 20.0 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.
(9 VAC 5-50-80, 9 VAC 5-80-110, and Condition 9 of 06/03/03 Permit)

Note: The permittee commented that Condition 2 did not include a provision for "one 6 minute period in any one hour, in which opacity shall not exceed 60 percent." The 8/25/97 permit condition did not contain this provision.

3. Emissions from the operation of Veneer Dryer No. 1 (EU ID #VD1) shall not exceed the limits specified below (annual emissions are calculated monthly as the sum of each consecutive 12-month period):

Particulate Matter	21.4 lbs/hr	76.9 tons/yr	(9 VAC 5-50-260)
PM-10	21.4 lbs/hr	76.9 tons/yr	(9 VAC 5-50-260)
Volatile Organic Compounds	47.9 lbs/hr	172.5 tons/yr	(9 VAC 5-50-260)
Carbon Monoxide	3.7 lbs/hr	13.3 tons/yr	(9 VAC 5-50-260)

(9 VAC 5-80-110 and Condition 7 of 06/03/03 Permit)

Monitoring

The exhaust from the veneer dryers (EU ID #VD1-VD3) shall be observed visually at least once each calendar week to determine if its emissions, excluding condensed water vapor/steam, are normal. Each unit observed having apparent abnormal visible emissions shall be followed up with a 40 CFR Appendix A Method 9 visible emissions evaluation unless the apparent abnormal condition is corrected as expeditiously as possible and recorded, and the apparent abnormal condition, its cause, and the corrective action measures taken are recorded. When conditions prevent taking opacity readings using 40 CFR 60 Appendix A Method 9, the permittee shall note the cause(s), such as: inclement weather conditions, steam plume interference, plume intermingling, and sun angle exceedance, and shall perform the Method 9 evaluation as soon as conditions permit.
(9 VAC 5-40-20, 9 VAC 5-50-20)

LIMITATION DEMONSTRATION

This demonstration will show that maintaining records of the veneer dryer emission factor, throughput, and

formulas is sufficient for periodic monitoring for these conditions.

Hourly and Annual limitations, Veneer Dryers:

Given: Throughput limit for Veneer Dryer No. 1 is $375,000 \times 10^3 \text{ ft}^2/\text{yr}$
Hourly throughput = $52,000 \text{ ft}^2/\text{hr}$

The following emission factors for veneer dryers are from a 1994 stack test on the No.1 Dryer.

PM = $.41 \text{ lb}/1000 \text{ ft}^2$

VOC = $.92 \text{ lb}/1000 \text{ ft}^2$

CO = $.071 \text{ lb}/1000 \text{ ft}^2$

Calculations for Veneer Dryers					
	Permit Limits		Emission Factors	Hourly emissions	Annual emissions
	Lbs/hr	Tpy	Lbs/ 1000 ft ³	Lbs/hr	Tpy
PM	21.4	76.9	.41	15.6	65.2
PM	21.4	76.9	.41	15.6	65.2
VOC	47.9	172.5	.92	33.8	147.7
CO	3.7	13.3	.071	2.6	11.4

Therefore, as long as the permittee does not exceed the maximum throughput capacity, the emission limits listed in Condition V.A.4 of the Title V permit will not be exceeded. As stated in the periodic monitoring chart, the facility will be required to keep the above listed emission factors, formulas and throughput capacity on site.

Recordkeeping

The following record keeping requirements are for the purposes of periodic monitoring (9 VAC 5-80-110):

- Required to keep records of throughput and emission data. **Note: the permittee questioned the frequency with which these records would be maintained. The permit was changed to add the word “current,” which means current throughput capacity. This information should change infrequently, or possibly not at all. Emission factors are periodically updated, and the permittee should update the recorded emission factors as new information is received.**
- Required to keep records of visible emissions observations, and any subsequent Method 9 visible emission evaluations, the cause of any abnormal and excess visible emissions, corrective measures taken to correct the excess visible emissions, and records of conditions which prevent Method 9 visible emission evaluations in the event of an apparently abnormal visible emission condition.
- Required to keep records of any emissions testing.

Testing

The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

The following condition is from the Commonwealth of Virginia's *Regulations for the Control and Abatement of Air Pollution*:

- The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the

appropriate locations.
(9 VAC 5-50-30, 9 VAC 5-80-110)

- If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM10	EPA Method 5 or as required by DEQ
Visible Emission	EPA Method 9 or as required by DEQ
VOC	EPA Method 25, 25a or as required by DEQ

(9 VAC 5-80-110)

Reporting

To support the periodic monitoring requirements (9 VAC 5-80-110 B) of the TV permit, the following conditions regarding reporting will be placed in the TV permit.

- Report throughput and emissions (calendar year)
- Report the results of any Method 9 visible emissions evaluations

EMISSION UNIT APPLICABLE REQUIREMENTS – (Veneer Conditioning Chamber EU ID# VCC)

Limitations

The Veneer Conditioning Chamber is subject to the conditions of a permit dated 06/03/03.

1. The veneer conditioning chamber (EU ID# VCC) shall process no more than $23,200 \times 10^3$ square feet per year (3/8" basis), calculated monthly as the sum of each consecutive 12 month period. (9 VAC 5-80-110, and condition 3 of 6/3/03 Permit)
2. Visible emissions (excluding condensed water vapor/steam) from the operation of the veneer conditioning chamber shall not exceed 20 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction. (9 VAC 5-50-80 and 9 VAC 5-80-110, and Condition 9 of 06/03/03 Permit)
3. Emissions from the operation of the veneer conditioning chamber (EU ID# VCC) shall not exceed the limits specified below (annual emissions are to be calculated monthly as the sum of each consecutive 12 month period):

Volatile Organic Compounds 0.6 lbs/hr 2.7 tons/yr (9 VAC 5-50-260)

Monitoring

1. The exhaust from the veneer conditioning chamber (EU ID# VCC) shall be observed visually at least once each calendar week to determine if its emissions, excluding condensed water vapor/steam, are normal. Each unit observed having apparent abnormal visible emissions shall be followed up with a 40 CFR Appendix A Method 9 visible emissions evaluation unless the apparent abnormal condition is corrected as expeditiously as possible and recorded, and the apparent abnormal condition, its cause, and the corrective action measures taken are recorded. When conditions prevent taking opacity readings using 40 CFR 60 Appendix A Method 9, the permittee shall note the cause(s), such as: inclement weather conditions, steam plume interference, plume intermingling, and sun angle exceedance, and shall perform the Method 9 evaluation as soon as conditions permit. (9 VAC 5-40-20, 9 VAC 5-50-20)

LIMITATION DEMONSTRATION

This demonstration will show that maintaining records of the veneer conditioning chamber emission factor, throughput, and formulas is sufficient for periodic monitoring for these conditions.

Given: Throughput limit for veneer conditioner chamber is $23,231 \times 10^3 \text{ ft}^2/\text{yr}$
Hourly throughput is $2,652 \times \text{ft}^2/\text{hr}$

The following emission factor is from AP 42 10.5 (1/2002) for RF dryers.

$$\text{VOC} = .23 \text{ lb}/1000 \text{ ft}^2$$

Calculations for Veneer Conditioning Chamber					
	Permit Limits		Emission Factors	Hourly emissions	Annual emissions
	Lbs/hr	Tpy	Lbs/ 1000 ft ³	Lbs/hr	Tpy
VOC	0.6	2.7	.23	0.61	2.67

Therefore, as long as the permittee does not exceed the maximum throughput capacity, the emission limits listed in Condition V.A.4 of the Title V permit will not be exceeded. As stated in the periodic monitoring chart, the facility will be required to keep the above listed emission factors, formulas and throughput capacity on site.

Recordkeeping

The following record keeping requirements are for the purposes of periodic monitoring (9VAC 5-80-110):

- Required to keep records of throughput and emission data.
- Scheduled and unscheduled maintenance, and operator training

Testing

The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

The following condition is from the Commonwealth of Virginia's *Regulations for the Control and Abatement of Air Pollution*:

- The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
(9 VAC 5-50-30, 9 VAC 5-80-110)
- If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Method 25, 25a or as required by DEQ

(9 VAC 5-80-110)

Reporting

To support the periodic monitoring requirements (9 VAC 5-80-110 B) of the TV permit, the following conditions regarding reporting will be placed in the TV permit.

- Report throughput and emissions (calendar year)
- Report the results of any Method 9 visible emissions evaluations

EMISSION UNIT APPLICABLE REQUIREMENTS – (Plywood Presses EU ID #P1, P2, and P3)**Limitations**

There are currently no permit limits on this equipment. It was installed prior to the effective date of the regulations.. The particulate limits are much higher than the potential emissions.

1. The presses shall process no more than 395.0 million sq ft/yr (3/8" basis), calculated monthly as the sum of each consecutive 12-month period.
(9 VAC 5-80-1180)
2. Visible emissions (excluding condensed water vapor/steam) from the plywood presses (EU ID #P1, P2, and P3) shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 60 percent opacity.
(9 VAC 5-40-80 and 9 VAC 5-80-110)
3. Emissions from the operation of the plywood presses (EU ID #P1, P2, and P3) shall not exceed the limits specified below (total, annual emissions to be calculated as the sum of each consecutive 12-month period):

Particulate Matter	1.5 lbs/hr	4.8 tons/yr	(9 VAC 5-40-260)
PM-10	1.5 lbs/hr	4.8 tons/yr	(9 VAC 5-40-260)
VOC	9.3 lbs/hr	29.6 tons/yr	(9 VAC 5-40-260)

(9 VAC 5-80-110)

Monitoring

1. The plywood presses (EU ID #P1-P3) shall be observed visually at least once each calendar week to determine if their emissions, excluding condensed water vapor/steam, are normal. Each unit observed having apparent abnormal visible emissions shall be followed up with a 40 CFR Appendix A Method 9 visible emissions evaluation unless the apparent abnormal condition is corrected as expeditiously as possible and recorded, and the apparent abnormal condition, its cause, and the corrective action measures taken are recorded. When conditions prevent taking opacity readings using 40 CFR 60 Appendix A Method 9, the permittee shall note the cause(s), such as: inclement weather conditions, steam plume interference, plume intermingling, and sun angle exceedance, and shall perform the Method 9 evaluation as soon as conditions permit.
(9 VAC 5-40-20, 9 VAC 5-50-20)

LIMITATION DEMONSTRATIONHourly limitations:

Plywood presses P1-P3 have not been previously permitted. The facility would fall under Rule 4-17 for Woodworking Operations.

Throughput to the plywood presses (combined) is $395,000 \times 10^3 \text{ ft}^2/\text{yr}$. Hourly throughput = $62,030 \text{ ft}^2$

Particulate emission factor = $.0243 \text{ lb}/10^3 \text{ ft}$

VOC emission factor = $0.15 \text{ lb}/10^3 \text{ ft}$

Calculations for Plywood Presses P1-P3 (combined)					
	Permit Limits		Emission Factors	Hourly emissions	Annual emissions
	Lbs/hr	Tpy	Lbs/ 1000 ft ³	Lbs/hr	Tpy
PM	1.5	4.8	.0243	1.5	4.8
VOC	9.3	29.6	.15	9.3	29.6

Therefore, as long as the permittee does not exceed the maximum throughput capacity, the emission limits listed in Condition VI.A.2 of the Title V permit will not be exceeded. As stated in the periodic monitoring chart, the facility will be required to keep the above listed emission factors, formulas and throughput capacity on site.

Recordkeeping

The following record keeping requirements are for the purposes of periodic monitoring (9 VAC 5-80-110):

- Required to keep records of current throughput capacity and emission factors. **The permittee will update throughput capacity and emission factors when there are any updates or changes.**
- Required to keep records of visible emissions observations.

Testing

The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

The following condition is from the Commonwealth of Virginia's *Regulations for the Control and Abatement of Air Pollution*:

- The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
(9 VAC 5-50-30, 9 VAC 5-80-110)
- If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM10	EPA Method 5 or as required by DEQ
Visible Emission	EPA Method 9 or as required by DEQ

(9 VAC 5-80-110)

Reporting

To support the periodic monitoring requirements (9 VAC 5-80-110 B) of the TV permit, the following conditions regarding reporting will be placed in the TV permit.

- Report the results of any Method 9 visible emissions evaluations
- Report throughput and emissions annually

EMISSION UNIT APPLICABLE REQUIREMENTS – (Dry Waste Transfer System EU ID #CTL)

There are currently no permit limits on this equipment. It was installed prior to the effective date of the regulations. Only the existing source opacity limits, Process Weight Rule (Rule 4-4) limits, and the grain-loading limits of Rule 4-17 are applicable. The particulate limits are much higher than the potential emissions; therefore, only the grain-loading limit is included in the Title V permit.

Limitations

1. Visible emissions (excluding condensed water vapor/steam) from the Dry Waste Transfer System (EU ID# CTL) shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 60 percent opacity.
(9 VAC 5-40-80 and 9 VAC 5-80-110)

2. Emissions from the operation of the Dry Waste Transfer System (EU ID #CTL) shall not exceed the limits specified below:

Particulate Matter .05 gr/dscf (9 VAC 5-40-2270)

PM-10 .05 gr/dscf (9 VAC 5-40-2270)

(9 VAC 5-40-2270 and 5-80-110)

Monitoring

The Dry Waste Transfer System baghouse (PCD ID #BH2) shall be observed visually at least once each calendar week to determine if its emissions, excluding condensed water vapor/steam, are normal. Each unit observed having apparent abnormal visible emissions shall be followed up with a 40 CFR Appendix A Method 9 visible emissions evaluation unless the apparent abnormal condition is corrected as expeditiously as possible and recorded, and the apparent abnormal condition, its cause, and the corrective action measures taken are recorded. When conditions prevent taking opacity readings using 40 CFR 60 Appendix A Method 9, the permittee shall note the cause(s), such as: inclement weather conditions, steam plume interference, plume intermingling, and sun angle exceedance, and shall perform the Method 9 evaluation as soon as conditions permit.
(9 VAC 5-50-20)

Recordkeeping

The following record keeping requirements are for the purposes of periodic monitoring (9 VAC 5-80-110):

- Required to keep records of throughput and emission data.
- Required to keep records of visible emissions observations.

Testing

The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

The following condition is from the Commonwealth of Virginia's *Regulations for the Control and Abatement of Air Pollution*:

- The permitted facility shall be constructed so as to allow for emissions testing at any time using

appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.

(9 VAC 5-50-30, 9 VAC 5-80-110)

- If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM10	EPA Method 5 or as required by DEQ
Visible Emission	EPA Method 9 or as required by DEQ

(9 VAC 5-80-110)

Reporting

To support the periodic monitoring requirements (9 VAC 5-80-110 B) of the TV permit, the following conditions regarding reporting will be placed in the TV permit.

- Report the results of any Method 9 visible emissions evaluations
- Report throughput and emissions annually

EMISSION UNIT APPLICABLE REQUIREMENTS – (Specialty Lines Sander EU ID #SDR)

There are currently no permit limits on this equipment. It was installed prior to the effective date of the regulations. Only the existing source opacity limits, Process Weight Rule (Rule 4-4) limits, and the grain-loading limits of Rule 4-17 are applicable. The particulate limits are much higher than the potential emissions; therefore, only the grain-loading limit is included in the Title V permit.

Limitations

1. Visible emissions (**excluding condensed water vapor/steam**) from the Sander (EU ID# SDR) shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 60 percent opacity.
(9 VAC 5-40-80 and 9 VAC 5-80-110)
2. Emissions from the operation of the Sander (EU ID #SDR) shall not exceed the limits specified below:

Particulate Matter	.05 gr/dscf	(9 VAC 5-40-2270)
PM-10	.05 gr/dscf	(9 VAC 5-40-2270)

(9 VAC 5-40-2270 and 5-80-110)

Monitoring

The sander baghouse (PCD ID #BH1) shall be observed visually at least once each calendar week to determine if its emissions, excluding condensed water vapor/steam, are normal. Each unit observed having apparent abnormal visible emissions shall be followed up with a 40 CFR Appendix A Method 9 visible emissions evaluation unless the apparent abnormal condition is corrected as expeditiously as possible and recorded, and the apparent abnormal condition, its cause, and the corrective action measures taken are recorded. When conditions prevent taking opacity readings using 40 CFR 60 Appendix A Method 9, the permittee shall note the cause(s), such as: inclement weather conditions, steam plume interference, plume intermingling, and sun angle exceedance, and shall perform the Method 9 evaluation as soon as conditions permit.
(9 VAC 5-50-20)

Recordkeeping

The following record keeping requirements are for the purposes of periodic monitoring (9 VAC 5-80-110):

- Required to keep records of throughput and emission data.
- Required to keep records of visible emissions observations.

Testing

The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

The following condition is from the Commonwealth of Virginia's *Regulations for the Control and Abatement of Air Pollution*:

- The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
(9 VAC 5-50-30, 9 VAC 5-80-110)

- If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM10	EPA Method 5 or as required by DEQ
Visible Emission	EPA Method 9 or as required by DEQ

(9 VAC 5-80-110)

Reporting

To support the periodic monitoring requirements (9 VAC 5-80-110 B) of the TV permit, the following conditions regarding reporting will be placed in the TV permit.

- Report the results of any Method 9 visible emissions evaluations

**EMISSION UNIT APPLICABLE REQUIREMENTS – (Central Truck Loading Bin
EU ID #CTLB)**

Limitations

1. Visible emissions from the Central Truck Loading Bin shall not exceed 20 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A), except during one six minute period in any one hour, in which opacity shall not exceed 60 percent.
(9 VAC 5-40-80 and 9 VAC 5-80-110)
2. Emissions from the operation of the Central Truck Loading Bin (EU ID #CTLB) shall not exceed the limits specified below (annual emissions are to be calculated monthly as the sum of each consecutive 12-month period:

Particulate Matter 8.6 lbs/hr 37.5 tons/yr (9 VAC 5-40-260)

PM-10 8.6 lbs/hr 37.5 tons/yr (9 VAC 5-40-260)

(9 VAC 5-80-110)

Monitoring

1. The Central Truck Loading Bin (EU ID #CTLB) shall be observed visually at least once each calendar week to determine if its emissions, excluding condensed water vapor/steam, are normal. Each unit observed having apparent abnormal visible emissions shall be followed up with a 40 CFR Appendix A Method 9 visible emissions evaluation unless the apparent abnormal condition is corrected as expeditiously as possible and recorded, and the apparent abnormal condition, its cause, and the corrective action measures taken are recorded. When conditions prevent taking opacity readings using 40 CFR 60 Appendix A Method 9, the permittee shall note the cause(s), such as: inclement weather conditions, steam plume interference, plume intermingling, and sun angle exceedance, and shall perform the Method 9 evaluation as soon as conditions permit.
(9 VAC 5-40-20, 9 VAC 5-50-20)

Recordkeeping

The following record keeping requirements are for the purposes of periodic monitoring (9 VAC 5-80-110):

- Required to keep records of throughput and emission data.
- Required to keep records of visible emissions observations.

Testing

The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

The following condition is from the Commonwealth of Virginia's *Regulations for the Control and Abatement of Air Pollution*:

- The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
(9 VAC 5-50-30, 9 VAC 5-80-110)

- If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM10	EPA Method 5 or as required by DEQ
Visible Emission	EPA Method 9 or as required by DEQ

(9 VAC 5-80-110)

Reporting

To support the periodic monitoring requirements (9 VAC 5-80-110 B) of the TV permit, the following conditions regarding reporting will be placed in the TV permit.

- Report the results of any Method 9 visible emissions evaluations

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upsets, within one business day.

FUTURE APPLICABLE REQUIREMENTS

The facility will be subject to 40 CFR 63 Subpart DDDD, the Plywood and Composite Wood Products MACT.

COMPLIANCE PLAN

Currently no compliance plan has been submitted by the permittee. This situation may change pending review of recent compliance tests conducted by the facility.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, record keeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
FCS	First-Cut Saw	9 VAC 5-80-720 B	PM/PM-10	
CS-C1, CS-C2	Chip Screen Relay Cyclones	9 VAC 5-80-720 B	PM/PM-10	
CUS	Cut Up Saws	9 VAC 5-80-720 B	PM/PM-10	
CV-1 through CV-10	Conveyors	9 VAC 5-80-720 B	PM/PM-10	
VD2, VD3 (C4)	Vacuum Exhaust Cyclone	9 VAC 5-80-720 B	PM/PM-10	
GL1, GL2	Glue Lines No. 1 & 2	9 VAC 5-80-720 B	VOC	
T #'s	Tanks	9 VAC 5-80-720	VOC	varies
FH	Fuel House Bark Unloading	9 VAC 5-80-720 B	PM/PM-10	

Emission Unit No.	Emission Unit Description	Citation (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
CTB	Chip Truck Bin	9 VAC 5-80-720 B	PM/PM-10	
UPRD	Unpaved Roads	9 VAC 5-80-720 B	PM/PM-10	
PM	Plywood Mill Fugitive Emissions	9 VAC 5-80-720 B	PM/PM-10 VOC	

¹The citation criteria for insignificant activities are as follows:
9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The facility did not request that any portion of the TV permit be made confidential.

PUBLIC PARTICIPATION

The public notice was placed in the Emporia Independence-Messenger on March 27, 2005. The public comment period expired on April 26, 2005. There were not any public comments that needed to be addressed before filing the proposed permit with EPA. There was one comment from Georgia Pacific which noted an applicable permit date error in the draft. This was corrected. The proposed permit was sent to EPA on May 16, 2005. The 45-day EPA review period ended on June 30, 2005 without comment.